

REMARKS

Claims 8-11, 13, 19 and 20 are pending in this Application. Claim 8 is the sole independent claim. By this Amendment, claims 1-7, 12, 16-18 and 21 are cancelled without prejudice or disclaimer. Claims 8 and 13 are amended. No new matter is added.

I. Drawing Objections

The drawings are objected to under 37 C.F.R. §1.83(a) for allegedly failing to show each and every feature recited in the pending claims. Specifically, it is alleged that the control device, memory, input/output and allocator device must be shown in the figures or the features cancelled from the claims.

As the apparatus claims reciting the control device, memory, input/output and allocator device are cancelled, the objection to the drawings is moot.

II. CLAIM REJECTIONS UNDER 35 U.S.C. §101:

Claims 1-21 are rejected under 35 U.S.C. §101 for allegedly failing to recited statutory subject matter. As claims 1-7, 12, 14-18 and 21 are no longer pending, the rejection of those claims is moot. The rejection of method claims 8-11, 13, 18 and 19 is respectfully traversed.

In rejecting independent method claim 8, it is alleged that the body of the claim or the claimed subject matter does not disclose produce a “tangible result”. Applicants submit that the method claims are properly written in an

acceptable format. Moreover, as independent claim 8 is amended to recite a tangible result, the rejection of the claims is moot.

III. CLAIM REJECTIONS UNDER 35 U.S.C. §103:

Claims 1-21 are rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent 4,510,602 to Engdahl, et al. (Engdahl) (identified in the Office Action as “Jerome”) in view of US 5,623,680 Flora-Holmquist, et al. (Flora-Holmquist) (identified in the Office Action as “Thomas”). As previously pointed out, claims 14 and 15 are not pending, having been cancelled in a preliminary amendment. Thus, the rejection of claims 14 and 15 is moot. Further, as claims 1-7, 12, 16-18 and 21 are currently cancelled, the rejection of those claims is also moot. The rejection of claims 8-11, 13, 19 and 20 is respectfully traversed.

It is admitted in the Office Action that Engdahl fails to disclose or suggest, “the allocation of a digital output value to one of the digital outputs being capable of being carried out by the allocator independently of the at least one input real value whose allocated setpoint value includes the independence state value.”

In an effort to overcome the admitted deficiency, it is alleged that it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the device of Engdahl according to the teachings of Flora-Holmquist. Specifically, it is alleged that Flora-Holmquist discloses “the allocation of a digital output value to one of the digital outputs being capable of

being carried out by the allocator independently of the at least one input real value whose allocated setpoint value includes the independence state value.”

Flora-Holmquist describes an application logic table 100 that is implemented by a processing unit 28 (Figs. 1, 6). Thus, it is, at best, unclear how one of ordinary skill in the art would have modified the gates 7, 14, comparator 10 and indicator 16 of Engdahl (i.e., the alleged “allocator”) to include the application logic table 100 of Flora-Holmquist such that the alleged allocator of Engdahl would be capable of outputting a digital output value independently of the at least one input real value whose allocated setpoint value includes the independence state value.

Moreover, modifying the alleged allocator of Engdahl according to the teachings of Flora-Holmquist would likely render Engdahl unusable. For example, the alleged allocator of Engdahl includes gates 7, 14, comparator 10 and indicator 16. Modifying the device to further include an application logic table 100 of Flora-Holmquist is neither suggested nor possible without redesigning the device and circuit of Engdahl. Re-designing the logic apparatus of Engdahl to somehow include the application logic table 100 of Flora-Holmquist would require steps not taught or suggested by either of the references. Therefore, the combination of references fails to render the rejected claims obvious because the suggested combination of references would require substantial redesign and reconstruction of the elements shown in the primary reference of Engdahl, as well as a change in the basic operating principle under

which Engdahl was designed to operate (see MPEP §2143.01(VI) citing *In re Ratti*, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959)).

Further, such modification would not have been obvious to a person of ordinary skill in the art at the time of the invention because Engdahl would no longer function for its intended purpose (see MPEP §2143.01(V),(VI), 2143.02).

Additionally, the combination of references fails to disclose or suggest, that “the equipment is switched to a safety state when the input real values deviate from the corresponding setpoint values for more than a predetermined time,” as recited in amended claim 8.

It is alleged in the Office Action that Flora-Holquist discloses that a “safety instrument switches to the safety state if the input real values deviate from the corresponding setpoint values for more than a predetermined time.”

However, Flora-Holquist merely discloses that the vectors in the application logic table 100 are tested for a TRUE condition relative to the input register vector to determine if an input action process is required or if a state transition is required. Thus, contrary to the allegation in the Office Action, Flora-Holquist is silent regarding switching equipment to a safety state when the input real values deviate from the corresponding setpoint values for more than a predetermined time.

Because the combination of references fails to disclose or suggest each and every feature recited in the rejected claims, withdrawal of the rejection is respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Fitzpatrick at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By



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